

## WHAT IS CLAIMED IS:

1. An animal consumable product utilized to maintain or restore hair color in the animal, comprising:

5 (a) a nutritionally adequate diet having at least one indirectly available amino acid therein and

(b) an effective amount of a directly available amino acid selected from the group consisting of tyrosine, phenylalanine and mixtures thereof.

10 2. A product according to claim 1, wherein said effective amount of directly available tyrosine is at least approximately 0.05% by weight of the diet.

15 3. A product according to claim 1, wherein said effective amount of directly available phenylalanine is at least approximately 0.10% by weight of the diet.

20 4. A product according to claim 1, wherein said effective amount of directly available amino acid is about 9 g per kg of diet dry weight.

5. A method for maintaining and restoring hair color in an animal, comprising the steps of:

25 (a) adding an effective amount of a directly available amino acid selected from the group consisting of tyrosine, phenylalanine and mixtures thereof to an animal consumable product having at least one indirectly available amino acid therein to produce a supplemented consumable; and

(b) feeding an efficacious amount of said supplemented consumable to the animal to maintain and restore hair color.

5           6.     A method according to claim 5, wherein said effective amount of directly available tyrosine is at least approximately 0.05% by weight.

10           7.     A method according to claim 5, wherein said effective amount of directly available phenylalanine is at least approximately 0.10% by weight.

15           8.     A method of providing for the genetic potential of a cat for hair melanin synthesis in the cat by maximizing the hair melanin synthesis comprising:  
              providing a cat having the capabilities of hair melanin synthesis; and  
              feeding the cat a nutritional diet comprising more than about 0.50% by weight of an amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof to maximize hair melanin synthesis in the cat.

20           9.     A method of Claim 8 wherein said nutritional diet comprises from more than about 1.65% by weight to less than about 2.40% by weight of said amino acid to maximize the hair melanin synthesis in said cat.

25           10.    A method of Claim 8 wherein said nutritional diet comprises more than about 0.80% by weight of indirectly available amino acid.

11. A method of Claim 9 wherein said nutritional diet comprises more than about 0.80% by weight of indirectly available amino acid.

5 12. A method of Claim 8 wherein said nutritional diet comprises more than about 0.70% by weight of directly available amino acid.

13. A method of Claim 9 wherein said nutritional diet comprises more than about 0.70% by weight of directly available amino acid.

10 14. A method of Claim 10 wherein said nutritional diet additionally comprises more than about 0.70% by weight of directly available amino acid.

15 15. A method of Claim 11 wherein said nutritional diet additionally comprises more than about 0.70% by weight of directly available amino acid.

20 16. A method of Claim 8 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

17. A method of Claim 9 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

25 18. A method of Claim 10 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

19. A method of Claim 11 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

20. A method of Claim 12 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

5 21. A method of Claim 13 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

22. A method of Claim 14 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

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23. A method of Claim 15 wherein said amino acid comprises a mixture of phenylalanine and tyrosine.

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24. A method of Claim 8 wherein said amino acid comprises phenylalanine.

25. A method of Claim 9 wherein said amino acid comprises phenylalanine.

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26. A method of Claim 8 wherein said cat is less than about 1 year old.

27. A method of Claim 9 wherein said cat is an adult cat.

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28. A product according to Claim 1, wherein said nutritionally adequate diet comprises more than about 0.80% by weight of indirectly available amino acid.

29. A product according to Claim 1, wherein said directly available amino acid comprises more than about 0.70% by weight of said nutritionally adequate diet.

5                   30. A method of allowing expression of the genetic potential of an animal for hair melanin synthesis in the animal by maximizing the hair melanin synthesis comprising:

                  feeding an animal a nutritional diet comprising more than about 0.50% by weight of an amino acid selected from the group consisting of  
10   tyrosine, phenylalanine, and mixtures thereof, for maximizing hair melanin synthesis in the animal.

                  31. An animal consumable product for maintaining or restoring hair color in an animal comprising a nutritionally adequate diet having  
15   more than about 0.80% by weight of at least one indirectly available amino acid and more than about 0.70% by weight of a directly available amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof.

                  32. An animal consumable product according to Claim 31  
20   wherein said at least one indirectly available amino acid comprises an amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof.

                  33. A method of allowing expression of the genetic potential of an animal for hair melanin synthesis in the animal by maximizing the hair  
25   melanin synthesis comprising:

                  feeding an animal a nutritional diet comprising from about 0.50% by weight to about 3.00% by weight of a bioavailable amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof, for maximizing hair melanin synthesis in the animal.

34. An animal consumable product for maintaining or restoring hair color in an animal comprising a nutritionally adequate diet comprising from about 0.50% by weight to about 3.00% by weight of a bioavailable amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof, which when consumed by an animal maximizes hair melanin synthesis in the animal.

35. A method for maintaining or restoring hair color in a human being comprising administering to a human being a therapeutically effective amount of an amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof.

36. A composition for maintaining or restoring hair color in a human being comprising a therapeutically effective amount of an amino acid selected from the group consisting of tyrosine, phenylalanine, and mixtures thereof.